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ABSTRACT

The Academy for High Performance at McHenry County College in Crystal Lake, Illinois, attempts through integrated workplace education programs to develop empowered workers capable of functioning in today's high-performance workplaces and individuals who are empowered in the fullest, transformative, liberating sense of the word. The academy's efforts in curriculum integration stem from its recognition that occupational students frequently do not get the general education courses necessary and appropriate to an associate degree level and hence are not getting many of the skills and competencies being requested by employers (the ability to think creatively, solve problems, communicate effectively, work in teams, know how to learn, and reason). To address this problem, the college developed the Academy for High Performance to integrate occupational and academic curricula. The academy's goal is to provide an academically rigorous curriculum in the general education core requirements in a manner that facilitates learning. By connecting courses in the arts and sciences directly with courses in specific occupational areas (for example, manufacturing management) and by preparing teachers to function as a curriculum team, the academy has been successful in reaching students that college would otherwise not have reached. (MN)

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EXTENDING THE REACH

by

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The current educational institutions in the U.S. specifically and the West generally are relatively young and were created to meet the demands of the burgeoning industrial society. And they have done this admirably. But the structure and processes appropriate for an industrial society are woefully inadequate for the technological world of today. Thus the pressures facing educational institutions to change and adapt perhaps more significant than any time in recent memory. Preparing individuals with high performance skills are a necessary component of our educational challenge. Integrating occupational and academic curricula is just one way to extend the reach of the arts and sciences in order to empower occupational learners to be competent, productive workers. But access to the broader base of general education can also enable the learners to become more fully aware of who they are as persons and to have transformative experiences.

The Academy at McHenry County College attempts to "walk the tightrope" between empowerments. Recognizing that the college has a responsibility to develop empowered workers capable of functioning in today's high performance workplace it nevertheless also recognizes its responsibility to develop individuals who are Empowered in the fullest, transformative, liberating sense of the word.

Visualize, if you will, a 48 year old factory worker struggling with a changing environment in the workplace. Picture also a young recent high school graduate (or, as often the case, a high school drop-out) seeking to find gainful employment that pays more than a subsistence wage and allows for some possibility for increasing responsibility. These individuals are experiencing changes in how work is done and what knowledge and skills

are necessary to function in today's workplace. What are the skills and competencies needed for these individuals to succeed in today's workforce?

The skills and competencies needed to succeed in today's workforce are significantly different from those needed for an industrial workforce. The social changes that we are now experiencing are no less fundamental than the changes that occurred with the invention of movable type in the fifteenth century and the development of steam power in the late eighteenth century. Both of those occurrences revolutionized life, dramatically altering the way [Western] society was structured and how the world was viewed. The informational and technological change of which we are a part is no less dramatic.

An interesting aspect of the new skills and competencies identified as needed is that they no longer are solely job and specific task related. The skills and competencies required include a broad base of knowledge that enable the new worker to think creatively, solve problems, communicate effectively, work in teams, know how to learn, and be able to reason. They have to demonstrate qualities of individual responsibility, self-esteem, and integrity. The new worker needs to have basic skills in reading, writing, mathematics, speaking, and listening. In short, the skills and competencies needed are the very same skills and competencies one develops through what has been typically identified as "general education" in a typical college level curriculum. And yet, much in the experience of occupational learners mitigates against entering into such learning opportunities.

Therein lies the rub. Student in occupational oriented courses typically do not see themselves as needing the broader based general education curriculum. In fact, they avoid it like the plague. Being

interested in and comfortable with specific technical skill development, the occupational students focus on taking those courses directly related (in their minds) to their chosen occupation. Adding to the difficulty is that often these students, given their occupational background, are seen as not fitting in to academic settings designed for further college bound (transfer) students. Faculty in academic areas are often far removed from the experiences of the occupational students, making it more difficult for them to relate to those students. Occupational students may typically have past educational experiences that make them feel inadequate to handle courses outside their specialty. This creates a challenge: how to provide to occupational students the broader based skills needed to succeed when these barriers exist? This was the challenge taken up by the Academy for High Performance at McHenry County College through its curriculum integration efforts. The Academy's efforts in curriculum integration essentially attempt to address the second recommendation proposed by Robertson(1996) as a means to facilitate transformative learning: to "Encourage an existential-systems perspective in the field, a perspective that not only concentrates on the experience of the learner but also on that of the teacher and on the way in which the teacher's and the learner's experiences interact."

The college recognized that occupational learners were not getting the general education courses necessary and appropriate to an associate degree level and, indeed, not getting those skills and competencies being asked for by employers. To address this concern the college developed an Academy for High Performance to integrate occupational and academic curricula. From the start this effort was seen as a means to extend the reach of the arts and sciences to student populations not normally served for the reasons

cited above. The intent has been to provide academically rigorous curriculum in the general education core requirements in a manner that facilitated learning. By connecting courses in the arts and sciences directly with courses in given occupational areas and by preparing teachers to function like a curriculum team, the Academy has been successful in reaching students the college would otherwise have not. The intent has been to make general education, arts and sciences courses directly relevant to the world and experiences of the occupational learners. Curriculum integration, then, has been a key element in the success of the Academy.

Curriculum integration can be seen from two different perspectives: content and process. From a content perspective, curriculum integration is the blending, melding, or building of connections among and between disparate subjects and academic content areas. There are several models that can be used: curriculum infusion, linked or paired courses, multidisciplinary efforts, and learning communities. From a process perspective, curriculum integration is the way subject matter is taught. It is the teaching of workplace skills through the instructional methodology and assessment techniques. The use of portfolios bridging across content areas and the structuring of class activities with workplace skill preparation in mind are examples of integration by process. Regardless of the perspective, curriculum integration occurs within a given semester and across semesters throughout a given curriculum sequence. The key point to remember is that curriculum integration provides a means by which broader based academic content areas are connected with specific occupational world and experiences of learners to provide for the development of those high performance skills that lead to the empowerment of the individual in the

workplace. But what are the implications of curriculum integration with regard to the concept of empowerment as implied through high performance skills and competencies?.

Academic and occupational course integration leads to an interesting empowerment situation. This situation, I believe, is the ultimate reason why academic and occupation integration is so difficult and why so few institutions attempt it.

From an employer's perspective, an empowered worker is one who has the knowledge and skills on all facets of work processes and business goals and actively participates in organizational decision-making. Bounded. Inasmuch as such empowerment may enable individuals to obtain greater economic, political, and social power within an existing system it does maintain a well defined boundary. Empowerment is valued as long as the focus of the empowerment is to enable the organization to achieve its goals and adapt to changing environments.

As often the case, however, when adults are provided an opportunity to learn, growth takes place well beyond the immediate educational intent. Learning in a sense is an unbounded experience. While specific intended learning goals may be achieved we also learn about ourselves and others, we learn about organizations and systems, and we learn about power and disenfranchisement. The irony in all this is that while much of the impetus for preparing individuals with high performance skills has been generated by business and industry with their conceptualization of empowerment is with a small "e", the ultimate result of providing occupational students with opportunities to learn in a broader sense often results in empowerment with a big "E".

But what about this big "E"? What about the value of educating the whole person that underlies traditional arts and sciences? What happens to those students who are finally, if reluctantly, exposed to the wider realm of learning provided through a general education core curriculum? In what ways are they empowered beyond the primary intent of the occupational field? Let's let them speak for themselves. The following observations of student empowerment were shared by Mark Eckel, Instructor of Sociology at McHenry County College and one of the Academy instructors involved with integration efforts.

Here are some examples from one of the Academy programs, Manufacturing Management. The students in the program are almost all currently employed in local factories, mainly as team leaders, quality control technicians, shift supervisors, and other skilled, but not-quite-management, positions. In the third semester of the program, students take Training the Trainer, a Manufacturing course dealing with on-the-job training, paired with Introduction to Social Science, a survey course which satisfies the social science requirement of the Associate of Applied Science degree. The social science course is taught with an eye toward integration with Training the Trainer, but also with other courses in the Manufacturing curriculum, such as Speech, Computer Literacy, Supervisory Responsibility, and Introduction to Manufacturing.

An obvious connection between social science and on-the-job training is the topic of educational psychology. For example, students can be taught about how people learn through various sensory channels, using the psychological knowledge to make them more versatile and effective trainers at work. To that end, one assignment asks the student to identify various sensory channels used in the workplace. It has been striking how fluently students apply abstract psychological concepts when they can link them with concrete examples on the job. Sometimes, a student makes a striking breakthrough into even broader intellectual achievement. An example is one man's description of the sensory aspect of welding:

Arc welding steel requires a flexible wrist, using tactile figure eight motions as well as kinesthetic arm movement to control rod feed and speed.

This is practiced at various amp settings to perfect and maintain a continuous arch.

A continuous arch brings the sound of bacon frying, the smell of ozone,

The brightness of the sun, and the taste of metal to the lips.

Imagine what a delight it was for the instructor to receive this poem in response to an assignment about sensory learning on the job!

One isn't sure what it is about Manufacturing Management that inspires poetry, but another poem came out of a different group of students, in connection with another assignment, this one on the social organization of the workplace. Intended to connect industrial sociology with manufacturing management, the assignment asks the student to discuss lines of authority, control methods, power, and the like, in their own place of work. The analysis is presented as a speech, applying skills learned in the speech course earlier in the program. One student analyzed the routine and nonroutine aspects of the work day of one of his co-workers, in the "Ode to The Tool Room Guy:"

He's an artist and designer
A parts creator, there's none finer
He can take a simple block
Whether wood or metal stock
Drill some holes and make some cuts
Add a couple bolts and nuts
File it here and file it there
Trim the excess he can spare
With precision by and by
Of steady hand and keenest eye
He'll cut a groove of perfect size
That can't be seen with naked eyes
Inserts bushings "fore and aft"

And slides it smoothly on a shaft
He'll have made the part we need
And though it was at moderate speed
We never give a second glance
With our new part, away we prance
And when this project's finally done
He'll begin another one

The speeches on the social organization of the workplace have contributed other insights. One student introduced her speech by saying, "Bureaucracy. Before I took this class, I didn't even know there was a word for it. I just thought it was the normal bull ____ we went through at work every day." She went on to make a very astute analysis of standardization, lines of authority, and so on—Max Weber's classic ingredients of bureaucracy—showing an enhanced awareness of how her work world actually works. To the extent that knowledge is power, she was empowered.

Yet another student was drawing his small mold-making company's organizational chart on the blackboard: The old owner, who is the president; the new owner upon the old owner's impending retirement, who is the vice president; the foreman, the journeyman moldmakers, the apprentices, "...and then there's Eddie. Nobody knows where Eddie fits in the organization. But he's the brother of the president, so they make work for him. He goes to pick up lunch, he carries paperwork to customers, and so on." Later that evening, a student was discussing the structure of the large enterprise for which he worked. Referring to the company's non-layoff policy, he noted that some people had had positions cooked up for them, to keep them busy until the company could think of a better way to use them. Everyone in the room looked at one another, and exclaimed, in one voice, "Eddie!" A very important insight about social organization emerged that evening, through pure serendipity: **Every organization has an Eddie.** (Eckel, 1998)

Integrating academic curricula with occupational curricula enables us to reach students in ways that we may never had before. Our success has

been that students have attained levels of awareness far beyond the mere content of a particular curriculum. Through this integration we seek to both empower and Empower individuals.

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